Historia Mathematica 11 (1984) 242-249

ABSTRACTS

EDITED BY ALBERT C. LEWIS

The purpose of this department is to give sufficient information about the subject matter of each publication to enable users to decide whether to read it. It is our intention to cover all books, articles, and other materials in the field.

Books for abstracting and eventual review should be sent to this department, with an extra copy sent directly to the editor of the Book Reviews Department if the publisher wishes to accelerate the process. Materials should be sent to Dr. Albert C. Lewis, McMaster University, Hamilton, Ontario L8S 4M2, Canada.

Readers are invited to send reprints, autoabstracts, corrections, additions, and notices of publications that have been overlooked. Be sure to include complete bibliographic information, as well as transliteration and translation for non-European languages. We need volunteers willing to cover one or more journals for this department.

In order to facilitate reference and indexing, entries are given abstract numbers which appear at the end following the symbol #. A triple numbering system is used: the first number indicates the volume, the second the issue number, and the third the sequential number within that issue. For example, the abstracts for Volume 11, Number 2 will be numbered: 11.2.1, 11.2.2,..., 11.2.11, etc. The abstract numbers of books are underlined.

A name in parentheses at the end of an entry indicates the abstractor. In this issue there are abstracts by J. W. Dauben, A. C. Lewis, E. R. Phillips, and G. J. Tee.

0315-0860/84 $3.00

ABE, GAKUHO 1980 Shūtarō Teramura and the recent progress of studies of MAGIC SQUARES in JAPAN. Sûgakushi Kenkyû No. 86, 14-21. In Japanese. MR 83d:01005. (ACL) #11.2.1

ABRAHAM, GEORGE 1982 Algebraic formulae for the moon, Saturn, and Jupiter in the PANCASIDDHANTIKA. Archive for History of Exact Sciences 26, 287-297. (ACL) #11.2.2

ALEKSANDROV, P. S., KOLMOGOROV, A. N., & YUSHKEVICH, A. P. 1980 Mathematics and the history of mathematics (on the works of A. I. MARKUSHEVICH in the history of mathematics). Voprosy Istorii Estestvoznaniya i Tekhniki, No. 2, 96-100. In Russian. MR 83c:01039. (ACL) #11.2.3

ARBOLEDA, L. C. 1980 The birth of the Soviet school of Topology. Remarks on letters from P. S. ALEKSANDROV and P. S. URYSON to M. FRECHET (in Russian). Istoriko-Matematicheskie Issledovaniya 25, 281-302. Correspondence in the Archives of the Academy of Sciences, Paris. (ERP) #11.2.4

AUJAC, GERMAINE 1984 Autolycos de Pitané, prédécesseur d'Euclide. Cahiers du Séminaire d'Histoire des Mathématiques 5, 1-12. AUTOLYCOS OF PITANÉ, predecessor of EUCLID. (ACL) #11.2.5

BASHMAKOVA, I. G. 1980 The composition of quadratic forms, 13th-16th centuries. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 303-314. The prehistory of complex numbers. LEONARDO OF PISA, L. PACIOLI, and F. VIÈTE. (ERP) #11.2.6

BECHER, HARVEY W. 1980 WILLIAM WHEWELL and Cambridge mathematics. Historical Studies in the Physical Sciences 11, 1-48. This account of Whewell's influence on mathematics as taught at CAMBRIDGE UNIVERSITY makes use of original sources and details his ambivalence toward the continental approaches which he helped to introduce and later to suppress. (ACL) #11.2.7

BIERMANN, K. R. 1980 Results of new investigations on Gauss. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 266-280. Unpublished papers of the young GAUSS and some letters. (ERP) #11.2.8

BIGGS, N. L. 1983 De Morgan on MAP COLOURING and the separation axiom. Archive for History of Exact Sciences 28, 165-170. AUGUSTUS DE MORGAN. MORITZ PASCH. (ACL) #11.2.9

BILODEAU, G. G. 1982 The origin and early development of NONANALYTIC INFINITELY DIFFERENTIABLE FUNCTIONS. Archive for History of Exact Sciences 27, 115-135. R. P. BOREL, Jr., T. CARLEMAN, S. MANDELBROJT. (ACL) #11.2.10

BLAY, MICHEL 1983 La conceptualisation newtonienne des phénomenes de la couleur. Paris (J. Vrin). 304 pp. Bibliography. Index. 99 F. A study of the creation of the mathematical theory of color culminating in I. NEWTON's work. (ACL) #11.2.11

BRIGAGLIA, ALDO 1984 Sur les relations des mathématiciens francais et italiens au début du XXe siècle. Cahiers du Séminaire d'Histoire des Mathématiques 5, 21-48. On the relations between FRENCH and ITALIAN mathematicians at the beginning of the 20th century. (ACL) #11.2.12

CORCORAN, JOHN, & WOOD, SUSAN 1980 Boole's criteria for validity and invalidity. Notre Dame Journal of Formal Logic 21, 609-638. Compares GEORGE BOOLE's earliest criteria with those traditionally (and still generally) employed, and gives in modern terms the logical and mathematical content of Boole's first logical work, The mathematical analysis of logic, 1847. (ACL) #11.2.13

DALE, A. I. 1982 Bayes or Laplace? An examination of the origin and early applications of BAYES' THEOREM. Archive for History of Exact Sciences 27, 23-47. An analysis of Bayes' 1763 "Essay towards solving a problem in the Doctrine of Chances" and P. S. LAPLACE's 1774 "Mémoire sur la probabilité des causes par les événements." (ACL) #11.2.14

DEAKIN, M. A. B. 1982 The development of the LAPLACE TRANSFORM, 1737-1937. II. Poincaré to Doetsch, 1880-1937. Archive for History of Exact Sciences 26, 351-381. (ACL) #11.2.15

DEMIDOV, S. S. 1980 Development of the theory of first order partial differential equations, 18th-19th centuries. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 71-103. L. EULER and J. D'ALEMBERT (the "formal analytic period"); J. L. LAGRANGE's theory and A. CAUCHY's method; C. G. JACOBI, S. LIE. (ERP) #11.2.16

DEMIDOV, S. S. 1982 The study of partial DIFFERENTIAL EQUATIONS of the first order in the 18th and 19th centuries. Archive for History of Exact Sciences 26, 325-350. J. L. LAGRANGE; C. G. JACOBI; S. LIE. (ACL) #11.2.17

DEMIDOV, S. S. 1983 On the history of the theory of LINEAR DIFFERENTIAL EQUATIONS. Archive for History of Exact Sciences 28, 369-387. "I shall discuss the remarkable analogy between algebraic and linear differential equations, an analogy which largely determined the development of the theory of the latter throughout the 19th century." GUILLAUME B.I.T. LIBRI (1803-1869). (ACL) #11.2.18

DHOMBRES, J. 1982/1983 La langue des caculs de Condillac ("Ou comment propager les Lumiere?"). Sciences et techniques en perspective 2, 197-235. E. CONDILLAC's Langue des Calculs was composed about 1778, two years before his death, and published posthumously. A description of the work, which was intended to promote the spread of mathematical reason within the Enlightenment, is given. (ACL) #11.2.19

DHOMBRES, J., ed. 1982/1983 Sciences et techniques en perspective, 3, Numéro Spécial consacré à l'option histoire et philosophie des Sciences dans les DEUG français. 35 FF. Available from Institut de Mathématiques et d'Informatique, 2 rue de la Houssinière, 44072 Nantes Cedex, France. A special number of 172 pages devoted to the syllabuses and samples of examinations in history and philosophy of science at thirteen French universities. TEACHING history of mathematics. (ACL) #11.2.20

DIEUDONNE, J. 1981 Schur functions and GROUP REPRESENTATION. In Young tableaux and Schur functions in algebra and geometry (Toruń, 1980), pp. 7-19. Paris (Soc. Math. France). I. SCHUR. MR 83c:01034. (ACL) #11.2.21

DOROFEEVA, A. V., & TIKHOMIROV, V. M. 1980 From Lagrange's multipliers to Pontryagin's maximum principle. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 104-128. CALCULUS OF VARIATIONS: necessary conditions for the existence of extremal values in problems with constraints. (ERP) #11.2.22

DUTKA, JACQUES 1982 Wallis's product, Brouncker's continued fraction, and Leibniz's series. Archive for History of Exact Sciences 26, 115-126. Historical sketch of JOHN WALLIS's infinite product for $4/\pi$ and the attempts, over three centuries, to find the method by which WILLIAM BROUNCKER (1620?-1684) obtained his equivalent continued fraction. Early results by Indian mathematicians for the series for $\pi/4$, later named for LEIBNIZ, are reviewed and extended. (ACL) #11.2.23

EDWARDS, HAROLD, NEUMANN, OLAF, & PURKERT, WALTER 1982 Dedekinds "Bunte Bemerkungen" zu Kroneckers "Grundzüge." Archive for History of Exact Sciences 27, 49-85. Transcription, with introduction and commentary, of R. DEDEKIND's hitherto unpublished notes on L. KRONECKER's "Grundzüge einer arithmetischen Theorie der algebraischen Grössen" of 1882. (ACL) #11.2.24

EGOROV, D. F. 1980 Letters from D. F. EGOROV to N. N. LUZIN. In Russian. With introduction by P. S. Aleksandrov; notes by F. A. Medvedev and A. P. Yushkevich. Historiko-Matematicheskie Issledovanya 25, 335-361. Letters from Egorov to his student, Luzin (1905-1914). (ERP) #11.2.25

EISENSTAEDT, J. 1982 Histoire et singularités de la solution de Schwarzschild (1915-1923). Archive for History of Exact Sciences 27, 157-198. A history of K. SCHWARTZCHILD's solution to the field equations of GENERAL RELATIVITY for a single spherical body of matter. (ACL) #11.2.26

FOWLER, D. H. 1982 Book II of EUCLID's Elements and a pre-Eudoxan theory of ratio. Part 2: sides and diameters. Archive for History of Exact Sciences 26, 193-209. Part I abstracted #2128. The reconstruction of an anthyphairetic RATIO THEORY. (ACL) #11.2.27

FRASER, CRAIG 1983 J. L. LAGRANGE's early contributions to the principles and methods of mechanics. Archive for History of Exact Sciences 28, 197-241. An examination in L. EULER's and J. B. D'ALEMBERT's works of antecedents of Lagrange's early approach to the foundations of mechanics and an investigation of Lagrange's reasons for shifting from the principle of least action to the principle of virtual velocities. (ACL) #11.2.28

GANI, J. 1982 Newton on "a question touching ye different odds upon certain given chances upon dice." Mathematical Scientist 7, 61-66. On a probability question put by SAMUEL PEPYS (1633-1703) to ISAAC NEWTON (1642-1727) in 1693. MR 83d:01015. (ACL) #11.2.29

GERIKE, H. 1982 Zur Vorgeschichte und Entwicklung des Krümmungsbegriffs. Archive for History of Exact Sciences 27, 1-21. On the prehistory and development of the concept of CURVATURE of curves and surfaces from Oresme to Euler. (ACL) #11.2.30

GISPERT, HÉLÈNE 1983 Sur les fondements de l'analyse en France (à partir de lettres inédites de G. Darboux et de l'étude des différentes éditions du "Cours d'analyse" de C. Jordan). Archive for History of Exact Sciences 28, 37-106. A study of the foundations of ANALYSIS in FRANCE based on unpublished letters of GASTON DARBOUX and on a comparison of the different editions of CAMILLE JORDAN's "Cours d'analyse." Approximately twenty pages are devoted to extracts from Darboux's letters to JACQUES HOUËL between 1872 and 1882. Darboux and Jordan are pictured as preparing the way in France for the later work of Borel and Baire. (ACL) #11.2.31

GOLOVINSKII, I. A. 1980 The early history of analytic iterations and functional equations. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 25-51. Attempts to construct analytic solutions of nonlinear RECURSIVE (iterative, in the author's words) EQUATIONS, from the end of the 18th century to the 1920s. (ERP) #11.2.32

GRIGORIYAN, A. T., AND NEVSKAYA, N. I. 1980 LAMBERT and the Petersburg Academy of Sciences. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 218-224. Uses archival materials. (ERP) #11.2.33

GRIGORYAN, A. T., & KIVALEV, B. D. 1981 Daniel Bernoulli (1700-1782). Moscow (Izd. "Nauka"). 320 pp. Illustrated. Detailed technical study of the life and work of DANIEL BERNOULLI, including Hydrodynamica (1738). (GJT) #11.2.34

GRIGOR'YAN, A. T., & YUSHKEVICH, A. P. 1980 Sowjetische Forschungen zur Geschichte der Mathematik und Mechanik. NTM: Zeitschrift für Geschichte der Naturwissenschaft, Technik und Medizin 17, No. 2, 23-37. Soviet research on the history of mathematics and mechanics. MR 83c:01064. (ACL) #11.2.35

GUILLAUME, M. 1983/1983 Des influences subies et exercées par Condillac en matière de théorie de la connaissance. Sciences et techniques en perspective 2, 6-21. On the influence of E. CONDILLAC on the theory of knowledge. J. D. GERGONNE. (ACL) #11.2.36

GUZMAN, MIGUEL DE 1983 Impactos del analisis armonico. LLULL, Boletin de la Sociedad Española de Historia de las Ciencias 5, Nos. 8-9, 27-63. An account of the history of HARMONIC ANALYSIS from Pythagoras to modern times. (ACL) #11.2.37

HAWKINS, THOMAS 1982 WILHELM KILLING and the structure of LIE ALGEBRAS. Archive for History of Exact Sciences 26, 127-192. F. ENGEL. ELIE CARTAN. (ACL) #11.2.38

HENDERSON, LINDA DALRYMPLE 1983 The fourth dimension and NON-EUCLIDEAN GEOMETRY in modern ART. Princeton (Princeton Univ. Press). xxiii+453 pp. Index. Bibliography. Illustrations. From the introduction: "Only the popularization of Einstein's General Theory of Relativity, with its redefinition of the fourth dimension as time instead of space, brought an end to this era in which artists, writers, and musicians believed they could express higher spatial dimensions." CHARLES HOWARD HINTON. (ACL) #11.2.39

HERMITE, CHARLES 1984 Lettres de Charles Hermite à Gösta Mittag-Leffler (1874-1883). Cahiers du Séminaire d'Histoire des Mathématiques 5, 49-285. Transcription with notes of letters to G. MITTAG-LEFFLER. The originals are in the Mittag-Leffler Institute in Djursholm. (ACL) #11.2.40

HYMAN, ANTHONY 1982 CHARLES BABBAGE, pioneer of the computer. Princeton (Princeton Univ. Press). xiii+287 pp. $25.00. Nontechnical study of the life and work of Charles Babbage, based on much unpublished material, as well as many published sources. Finely illustrated. (GJT) #11.2.41

KENNEDY, HUBERT 1983 Peano: Storia di un matematico. Torino (Editore Borinchieri). 297 pp. An Italian translation by P. Pagli of the G. PEANO biography abstracted in #1598. This volume contains several family photographs and the reference notes that were missing from the original edition. (ACL) #11.2.42

KNORR, WILBUR R. 1982 INFINITY and CONTINUITY: the interaction of mathematics and philosophy in antiquity. In Infinity and continuity in ancient and medieval thought, N. Kretzmann, ed. pp. 112-145. Ithaca (Cornell Univ. Press). (ACL) #11.2.43

KOZHUKHOVA, G. M. 1980 The Arabic version of ARCHIMEDES' Measurement of the Circle. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 315-316. The author claims that this version is closer to the original than the Greek version whose translation appears in most European publications. (ERP) #11.2.44

KRETZMANN, NORMAN, ed. 1982 INFINITY and CONTINUITY in ancient and medieval thought. Ithaca/London (Cornell Univ. Press). 367 pp. Index. Bibliography. $29.50. Based on papers presented at a conference held at Cornell University, April 20-21, 1979. Papers by W. R. Knorr, I. Mueller, and E. D. Sylla are individually abstracted. (ACL) #11.2.45

KÜSSNER, MARTHA 1979 Die Gaussiana in der New York Public Library und die Manuskripte des Anton von Heiligenstein. Mitteilungen der Gauss Gesellschaft (Göttingen) No. 16, 17-30. Manuscripts and other documents by C. F. GAUSS in the New York Public Library. Some anonymous items are attributed to von Heiligenstein, a student of Gauss. MR 83c: 01052 (ACL) #11.2.46

KUZICHEVA, Z. A. 1980 Symbolic Logic in LAMBERT's Work. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 225-247. Discussion of a little known aspect of Lambert's research. (ERP) #11.2.47

LAPTEV, B. L. 1980 LAMBERT--the Geometer. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 248-260. The work is divided into three parts: Trigonometry; Perspective and Cartography; Foundations of (Euclidean) Geometry. (ERP) #11.2.48

LEONHARD EULER IN MEMORIAM 1983 Istoriko-Matematicheskie Issledovaniya 27. Eleven articles in this volume were written to commemorate the 200th anniversary of the death of Euler (1707-1783). The individual articles are: Melnikov, I. G., "Idoneal numbers in Euler's manuscripts," 10-27; Matvievskaya, G. P., "Polygonal numbers in Euler's notebooks," 27-49; Ozhigova, E. P., "Euler's function $\phi(n)$, as discussed in his notebooks," 51-63; Maistrov, L. E., "On prime values of the polynomial $x^2 + x + 41$," 63-67; Lavrenenko, T. A., "The solution of 3rd and 4th degree equations in Euler's later works," 67-79; Yushkevich, A. P., "An unpublished manuscript of L. Euler on the differential calculus," 79-87; Bely, Ju. A., "Geometry of the triangle in the unpublished manuscripts of Leonhard Euler," 88-101; Malykh, A. E., "On Euler's creation of the combinatorial theory of latin squares," 102-123; Nevskaya, N. I., "Little known works of L. Euler in astronomy," 123-137; Sierpinski, W., "Address given at the April 17, 1957 meeting of the USSR Academy of Sciences, commemorating the 250th anniversary of the birth of L. Euler," 137; Frechet, M., "Address given at the April 17, 1957 meeting of the USSR Academy of Sciences, commemorating the 250th anniversary of the birth of L. Euler," 138-141. (ERP) #11.2.49

LEVITAN, B. M. 1980 Historical sketch of the history of ALMOST PERIODIC FUNCTIONS. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 156-166. From P. Bohl (1890s), E. Esclangen, and H. Bohr to contemporary authors. (ERP) #11.2.50

LLORENTE, PASCUAL 1983 Algunos commentarios acerca de dos articulos recientes sobre temas de historia de las matematicas. LLULL, Boletin de la Sociedad Española de Historia de las Ciencias 5, Nos. 8-9, 65-75. Comments on two papers previously published in LLULL (see abstracts #2380 and #2339) concerning EUCLID, CARDANO, and PROBABILITY. (ACL) #11.2.51

MAISTROV, L. E., & PETRENKO, O. L. 1981 Pribory i instrumenty istoricheskogo znacheniya. Vychislitelnye mashiny. Moscow (Izd. "Nauka"). 160 pp. 2.10 r. "Devices and instruments of historical significance. CALCULATING MACHINERY." Illustrated catalogue of calculating devices in Soviet museums and private collections. Appendix by L. E. Maistrov and V. Ya. Sokolov on "A brief survey of the life and work of W. T. OHDNER." (GJT) #11.2.52

MARKUSHEVICH, A. I. 1980 Problems in the history of the theory of analytic functions in the 19th century. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 52-70. The text of an address to the International Congress of Mathematicians (at Helsinki) in 1978. It discusses the intellectual climate in which B. RIEMANN wrote his dissertation. (ERP) #11.2.53

MEDVEDEV, F. A. 1980 The AXIOM OF CHOICE in analysis. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 167-188. Applications in analysis by A. Cauchy, E. Heine, G. Cantor, G. Peano, and others. (ERP) #11.2.54

MICHLING, HORST 1979 Aus der Bücherei des Gymnasiasten JOHANN FRIEDRICH CARL GAUSS. Mitteilungen der Gauss Gesellschaft (Göttingen) No. 16, 5-16. Account of some schoolbooks of Gauss' in the period 1788-1791 which are part of his 2500-volume library in Göttingen. MR 83c:01053. (ACL) #11.2.55

MILLS, STELLA 1983 The controversy between COLIN MACLAURIN and GEORGE CAMPBELL over COMPLEX ROOTS, 1728-1729. Archive for History of Exact Sciences 28, 149-164. A priority dispute over methods of determining the complex roots of an algebraic equation. (ACL) #11.2.56

MUELLER, IAN 1982 ARISTOTLE and the QUADRATURE OF THE CIRCLE. In Infinity and continuity in ancient and medieval thought, N. Kretzmann, ed., pp. 146-164. Ithaca (Cornell Univ. Press). "The hypothesis that Aristotle knew of no 'real' quadratures is of interest not only for the history of Greek mathematics but also for understanding Aristotle's attitude toward the problem." (ACL) #11.2.57

PAIOW, M. E. 1982 Die mathematische Theaetetsstelle. Archive for History of Exact Sciences 27, 87-99. On the Theodorus passages in PLATO's Theaetetus. GREEK. NUMBER THEORY. (ACL) #11.2.58

PETROVA, S. S., & ROMANOVSKAYA, D. A. 1980 The discovery of Taylor's series. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 10-24. The use of Taylor's series by I. NEWTON and J. GREGORY. (ERP) #11.2.59

PYENSON, LEWIS 1982 RELATIVITY in late Wilhelmian Germany: the appeal to the preestablished harmony between mathematics and physics. Archive for History of Exact Sciences 27, 137-155. (ACL) #11.2.60

PYENSON, LEWIS 1983 Neohumanism and the persistence of pure mathematics in Wilhelmian GERMANY. Philadelphia: Amer. Philos. Soc. xii+136 pp. Index. Paperbound. $10.00. Concerned with "the genesis of pedagogical reform in mathematics, the special relationship between pure mathematics and neohumanism, and the persistence of pure mathematics despite intense pressure on mathematicians to redirect their efforts toward technical applications" (p. ix) in turn-of-the-century Germany. FELIX KLEIN. (ACL) #11.2.61

RAHMAN, A., with M. A. ALVI, S. A. KHAN GHORI, & K. V. SAMBA MURTHY. 1982. Science and Technology in Medieval India--A Bibliography of Source Materials in Sanskrit, Arabic, and Persian. New Delhi: Indian National Science Academy. Rs. 200.00 and $70.00. This BIBLIOGRAPHY offers a survey of 10,000 medieval technical manuscripts in Sanskrit, Arabic, and Persian available in INDIA. It supplies information on contents, authorship, availability, date, language, text, studies, and translations of manuscripts wherever possible, on the basis of catalogues and other sources. The names of manuscripts and authors have been arranged in alphabetical order under 13 subjects, including Mathematics, pages 381-427. (JWD) #11.2.62

RASHED, R. 1983 Nombres amiables, parties aliquotes et nombres figurés aux XIIIeme et XIVeme siècles. Archive for History of Exact Sciences 28, 107-147. AMICABLE NUMBERS, ALIQUOT PARTS, and FIGURATE NUMBERS in the 13th and 14th centuries. (ACL) #11.2.63

ROZENFELD, B. A. 1980 The mathematical works of Qutb ad-Din al-Shirazi. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 320-327. AL SHIRAZI (1236-1311). Parallel lines. Infinitesimal arguments. (ERP) #11.2.64

SABRA, A. I. 1982 IBN AL-HAYTHAM's lemmas for solving "ALHAZEN'S PROBLEM." Archive for History of Exact Sciences 26, 299-324. Gives an account of those aspects of al-Hasan ibn al-Haytham's 11th-century treatment which can be directly related to C. HUYGEN's 1672 solution. (ACL) #11.2.65

SACKSTEDER, WILLIAM 1981 Hobbes: geometrical objects. Philosophy of Science 48, 573-590. THOMAS HOBBES's philosophy of geometry. MR 83d:00019. (ACL) #11.2.66

SCHMID, WILFRIED 1982 Poincaré and Lie groups. Bulletin of the American Mathematical Society, N.S. 6, 175-186. H. POINCARÉ. MR 83c:01035. (ACL) #11.2.67

SEIDE, REINHARD 1981 Kontinuum und geometrischer Atomismus bei Demokrit. Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften 65, 105-116. The continuum and geometric atomism of DEMOCRITUS. MR 83d:01004. (ACL) #11.2.68

SHEYNIN, O. B. 1982 On the history of medical STATISTICS. Archive for History of Exact Sciences 26, 241-286. The author distinguishes a second stage in the history by the availability of statistical data and states that this "constitutes the prehistory of exploratory data analysis, a branch of mathematical statistics which has seen a ('mathematical') renaissance in the 1960's and 1970's." (ACL) #11.2.69

SHEYNIN, O. B. 1983 Corrections and short notes on my papers. Archive for History of Exact Sciences 28, 171-195. Corrections to thirteen Archive papers are given, and an index of mentioned names and an index of subjects are appended. Papers deal mainly with history of PROBABILITY and STATISTICS. (ACL) #11.2.70

SIEGMUND-SCHULTZE, REINHARD 1982 Die Anfänge der Funktionalanalysis und ihr Plaz im Umwälzungsprozess der Mathematik um 1900. Archive for History of Exact Sciences 26, 13-71. The beginnings of FUNCTIONAL ANALYSIS and its place in the revolution in mathematics around 1900. (ACL) #11.2.71

SIMONOV, N. I. 1980 On the development of the idea of a correctly posed problem in physics. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 129-155. A discussion of works of J. HADAMARD that shed light on subsequent investigations. (ERP) #11.2.72

SOUBLIN, JEAN-PIERRE 1984 Préhistoire des idéaux. Cahiers du Séminaire d'Histoire des Mathématiques 5, 13-20. The prehistory of IDEALS. E. E. KUMMER. (ACL) #11.2.73

SYLLA, EDITH DUDLEY 1982 Infinite INDIVISIBLES and CONTINUITY in 14th-century theories of alteration. In Infinity and continuity in ancient and medieval thought, N. Kretzmann, ed., pp. 231-257. Ithaca (Cornell Univ. Press). WALTER BURLEY. RICHARD KILVINGTON. (ACL) #11.2.74

TAYLOR, ANGUS E. 1983 A study of MAURICE FRÉCHET: I. His early work on point SET THEORY and the thoery of FUNCTIONALS. Archive for History of Exact Sciences 27, 233-295. The author concludes that Fréchet's early work on linear functionals, although historically significant and important, does not rank with his 1906 thesis. "Fréchet never developed a powerful technique as an analyst." (ACL) #11.2.75

TITEICA, GABRIELA 1980 Recollections of my father. Gazeta matematica (Bucharest) 85, 17-18. In Romanian. GEORGES TZITZÉICA (Titeica), 1873-1939, Romanian geometer. MR 83c:01056. (ACL) #11.2.76

UNIVERSITY OF ALEPPO 1980 Handlist of microfilms in the IHAS library. Aleppo (University of Aleppo, Institute for the History of Arabic Sciences). 345 pp. In Arabic. List of 1689 microfilmed manuscripts, mostly in Arabic and Persian, with an additional 56 entries in western languages. MR 83c:01067. (ACL) #11.2.77

VAKHABOV, S. 1980 Two mathematical models of al-Biruni. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 328-334. Two astronomical problems solved by AL-BIRUNI (973-1048). (ERP) #11.2.78

VIETE, FRANCOIS 1983 The analytic art: nine studies in algebra, geometry, and trigonometry from the Opus restitutae mathematicae analyseos, seu algebrâ novâ. Kent, Ohio (Kent State Univ. Press). 450 pp. $45.00. Translation with introduction and detailed notes by T. Richard Witmer of works by F. VIETE originally published between 1591 and 1615. (ACL) #11.2.79

VILLUENDAS, M. V. 1980 Ibn Muad's treatise on spherical trigonometry. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 317-319. IBN MU'AD (989-1079) wrote the first treatise dedicated to spherical trigonometry. (ERP) #11.2.80

VITA, VINCENZO 1982 Il punto nella terminologia matematica greca. Archive for History of Exact Sciences 27, 101-114. POINT in GREEK mathematical terminology. The author proposes a new explanation for the predominance of semeion during the golden age of Greek mathematics and for the emergence of stigme during the period of decadence. (ACL) #11.2.81

VIZGIN, V. P. 1980 The discovery of the equations of gravitation. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 261-265. The correspondence between A. EINSTEIN and D. HILBERT (discovered in the 1970s by J. Earman and C. Glymour) sheds light on the history of the covariant equations. (ERP) #11.2.82

WILDER, R. L. 1982 The mathematical work of R. L. MOORE: its background, nature, and influence. Archive for History of Exact Sciences 26, 73-97. MR 83k:01047 by F. Burton Jones. TOPOLOGY (ACL) #11.2.83

YUSHKEVICH, A. P. 1980 J. H. LAMBERT and L. EULER. In Russian. Istoriko-Matematischeskie Issledovaniya 25, 189-217. Uses journals, notes, and letters. (ERP) #11.2.84

YUSHKEVICH, A. P. 1980 Letters from A. DENJOY to N. N. LUZIN. In Russian. Istoriko-Matematicheskie Issledovaniya 25, 362-368. A survey of letters, (1926-1945) preserved in the Archives of the Soviet Academy of Sciences. (ERP) #11.2.85